



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,233	01/18/2006	Rodney B. Croteau	4630-66380-05	3606

24197 7590 08/09/2007
KLARQUIST SPARKMAN, LLP
121 SW SALMON STREET
SUITE 1600
PORTLAND, OR 97204

EXAMINER

PAK, YONG D

ART UNIT	PAPER NUMBER
----------	--------------

1652

MAIL DATE	DELIVERY MODE
-----------	---------------

08/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,233	Applicant(s) CROTEAU ET AL.	
	Examiner Yong D. Pak	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1, 3, 5, 7-10, 13-14, 16, 19-21, 24-25, 27, 29-32, 35-36, 38, 41, 43, 47, 49-53, 55-58, 60 and 63 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All. b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1,3,5,7-10,13,14,16,19-21,24,25,27,29-32,35,36,38,41,43,47,49-53,55-58,60 and 63.

Art Unit: 1652

DETAILED ACTION

This application is a 371 of PCT/US04/23656

The preliminary amendment filed on January 18, 2006, canceling claims 2, 4, 6, 11-12, 15, 17-18, 22-23, 26, 28, 33-34, 37, 39-40, 42, 44-46, 48, 54, 59, 61-62 and 63 and amending claims 5, 16, 29, 38, 41, 47, 49, 51, and 63, has been entered.

Claims 1, 3, 5, 7-10, 13-14, 16, 19-21, 24-25, 27, 29-32, 35-36, 38, 41, 43, 47, 49-53, 55-58, 60 and 63 are pending.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 3, 29 drawn to polypeptide comprising SEQ ID NO:2 or fragments/variants thereof.

Group II, claim(s) 5, 7-10, 13-14, 16, 19-21, 24-25, 27, 30-32, 35-36, drawn to a polynucleotide encoding the polypeptide of Group I, vector and host cell comprising said polynucleotide and a method of producing said polypeptide.

Group III, claim(s) 38, drawn to a method of identifying a nucleic acid sequence with the polynucleotide of Group II.

Group IV, claim(s) 41, 43, 47, 49-50, drawn to a method of hydroxylating a substrate using the polypeptide of Group I.

Group V, claim(s) 51-53, 55-58 and 60, drawn to a method of increasing paclitaxel yield in a cell by using the polynucleotide of Group II.

Art Unit: 1652

Group VI, claim(s) 63, drawn to an antibody that binds to the polypeptide of Group I.

The inventions listed as Groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking Groups I-VI appears to be that they all relate to a polynucleotide encoding a polypeptide having taxoid oxygenase activity, where said polynucleotide comprises a sequence as set forth in SEQ ID NO:1. The examiner has broadly interpreted "a sequence as set forth in SEQ ID NO:1" to encompass a fragment of as few as 2 contiguous nucleic acids of SEQ ID NO:1.

Schoendorf et al. (form PTO-1449) discloses a polynucleotide encoding a polypeptide having taxoid oxygenase activity, wherein said polynucleotide comprises as few as 2 contiguous nucleic acids of SEQ ID NO:1.

Therefore, the technical feature linking the inventions of Groups I-VI does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art.

The special technical feature of Group I is a polypeptide comprising SEQ ID NO:2 or fragments/variants thereof.

The special technical feature of Group II is a polynucleotide encoding the polypeptide of Group I, vector and host cell comprising said polynucleotide and a method of producing said polypeptide.

Art Unit: 1652

The special technical feature of Group III is a method of identifying a nucleic acid sequence with the polynucleotide of Group II.

The special technical feature of Group IV is a method of hydroxylating a substrate using a taxoid oxygenase.

The special technical feature of Group V is a method of increasing paclitaxel yield in a cell by using a polynucleotide encoding a taxoid oxygenase.

The special technical feature of Group VI is an antibody that binds to a taxoid oxygenase.

Further, the products of Groups I-II and VI do not share a technical feature for the following reasons.

Polypeptides, which are composed of amino acids, and polynucleotides, which are composed of purine and pyrimidine units, are structurally distinct molecules; any relationship between a polynucleotide and polypeptide is dependent upon the information provided by the nucleic acid sequence open reading frame as it corresponds to the primary amino acid sequence of the encoded polypeptide.

While the inventions of both group I and group VI are polypeptides, in this instance the polypeptide of group I is a single chain molecule that functions as an enzyme, whereas the polypeptide of group VI encompasses antibodies. Thus the polypeptide of group I and the antibody of group VI are structurally distinct molecules; any relationship between a polypeptide of group I and an antibody of group VI is dependent upon the correlation between the scope of the polypeptides that the antibody binds and the scope of the antibodies that would be generated upon immunization with the polypeptide.

Polypeptides, such as the antibody of group VI which are composed of amino acids, and polynucleotides, which are composed of nucleic acids, are structurally distinct molecules; any relationship between a polynucleotide and polypeptide is dependent upon the information provided by the nucleic acid sequence open reading frame as it corresponds to the primary amino acid sequence of the encoded polypeptide. In the present claims, a polynucleotide of group II will not encode an antibody of group VI, and the antibody of group VI cannot be encoded by a polynucleotide of group II.

The methods of Groups III-V do not share special technical features because the methods use products that lack a special technical feature, groups III and V are drawn to a method of using the polynucleotide of group II and group IV is drawn to a method of using the polypeptide of group I. The methods also do not share any special technical feature because the methods have different steps and effects.

Accordingly, Groups I-VI are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

Art Unit: 1652

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 571-272-0935. The examiner can normally be reached 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



Yong D. Pak
Patent Examiner 1652